



LOUDOUN COUNTY NPDES PHASE II STORMWATER PROGRAM

**Finance/Government Services Committee
of the
Loudoun County Board of Supervisors**

November 18, 2002



Acronyms

- BMP – Best Management Practices
- CIP – Capital Improvement Program
- DCR – Virginia Department of Conservation and Recreation
- DEQ – Virginia Department of Environmental Quality
- HHW – Household Hazardous Waste
- LC – Loudoun County
- LCPS – Loudoun County Public Schools
- MCM – Minimum Control Measure
- NOI – Notice of Intent
- NPDES – National Pollutant Discharge Elimination System
- P2 – National Pollutant Discharge Elimination System Phase II
- PP – Pollution Prevention
- SOG – Standard Operating Guidance
- SOP – Standard Operating Procedure
- SW - Stormwater
- SWM – Stormwater Management
- SWPPP – Stormwater Pollution Prevention Plan
- UA – Urbanized Area
- VPDES - Virginia Pollutant Discharge Elimination System
- WQ – Water Quality
- WRTAC – Water Resource Technical Advisory Committee



Agenda

- NPDES Phase II Program Background
- Loudoun County Project Process
- Proposed NPDES Phase II Program
- Program Costs
- Summation and Issues



NPDES Phase II Program



- National Pollutant Discharge Elimination System (NPDES) - mandated through the Clean Water Act ('72)
- NPDES Phase II mandate applied to Loudoun County by Final Rule, published in the Federal Register December 8, 1999;
- Virginia incorporated the Final Rule into state regulations September 27, 2000 (VPDES Regulations);
- Permit Area Based on 2000 Census Bureau's Urbanized Area (UA) calculations/Loudoun County Suburban Policy Area;
- Loudoun County must develop a stormwater management plan to meet the program's six minimum control measures in the permit area



NPDES Phase II Program



Required Minimum Control Measures

1. Public Education and Outreach
2. Public Involvement/ Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management
6. Pollution Prevention/Good Housekeeping





Loudoun County's NPDES Phase II SWM Plan



- Must be Submitted to Virginia DEQ by March 10, 2003;
- Must Include:
 - ✓ Name and Location (County or City name) of the regulated small MS4 for which the Registration Statement is submitted;
 - ✓ The name, address, and telephone number of the owner of the regulated small MS4;
 - ✓ The name(s) of the receiving water(s);
 - ✓ The BMPs the owner proposes to implement for each measure;
 - ✓ The measurable goals for each of the BMPs including the years in which the required actions will be undertaken, interim milestones, and frequency of action;
 - ✓ The person or persons responsible for implementing or coordinating the stormwater management program;
 - ✓ Certification with signature.



Loudoun County

Proactive Program Development: Setting the Stage



- Loudoun County's activities have positioned the County to comply with NPDES Phase II
- Loudoun County adopted the Revised General Plan, 2001
 - ✓ Highlights the County's commitment to water quality
 - ✓ Recognizes the County's River and Stream Corridor Policies
 - ✓ Specifically designates compliance with the NPDES Phase II regulations (Ch.5, Surface Water Policies, #15)
- Loudoun County adopted the new Facilities Standards Manual, 2001
 - ✓ Incorporates the Virginia Stormwater Management Handbook
- Loudoun County performing stormwater infrastructure survey in Suburban Policy Area
- Loudoun County Board of Supervisors appropriated funding for stormwater CIP



Loudoun County Proactive Program Development: Setting the Stage



To develop compliance strategies:

- Loudoun County organized and engaged Staff Advisory Group – Dept. Directors;
- Loudoun County organized and engaged five Staff Working Groups – Staff from:
 - ✓ Administration
 - ✓ General Services
 - ✓ Building & Development
 - ✓ Planning
 - ✓ Public Information
 - ✓ County Attorney
 - ✓ Management Services
 - ✓ Financial Services
 - ✓ Environmental & Historic Resources
 - ✓ Health Department
 - ✓ Fire/Rescue (HAZMAT)
 - ✓ OMAGI



Loudoun County Program Development Process



- Loudoun County retained AMEC Earth & Environmental, Inc. (AMEC) to support the County through the program development and permit application process, including:
 - ✓ A Loudoun County Stormwater Program Assessment:
 - Staff Interviews
 - Document/Ordinance review
 - Program “gap analysis” for Phase II compliance
 - Programming suggestions
 - Stormwater program budgeting for Phase II compliance
 - ✓ Interfacing with Virginia DEQ Regulators
 - ✓ A NPDES Phase II Compliance “Roadmap”
 - ✓ Facilitated County Staff Advisory Group and five Staff Working Groups
 - ✓ Development of a Draft Registration Statement (NOI)



Compliance Strategies

MCM 1 – Public Ed & Outreach



BMP/Task	Year to Implement	Primary Responsible Party(ies)	Measurable Goals
SWM News Releases	Year 1	PIO	By 12/03, 2x/yr after
Publicize HHW days	Year 1	Solid Waste	By 12/03, advertise
Publicize Non-Gov. Clean-up Efforts	Year 1	PIO	By 12/03, notify groups of ad opps.
Implementation Progress Reports	Year 1	E&HR Program	Posted to LC web site by 12/03
Cable TV Text Message Broadcast	Year 2	PIO	By 12/04, seasonal message, 4x/yr
SW Speakers Bureau	Year 2	Administration	By 12/04, organized and advertised
WQ/SWM Materials to LCPS	Year 3	E&HR Program	Disbursed by 12/05
LC Env. Ed./ Outreach Web Site	Year 3	E&HR Program	Begin by 12/05
SWM Infrastructure CDs Available	Year 3	OMAGI	Available by 12/05
SWM Materials Available from LC Web Site	Year 4	E&HR Program/PIO	Available by 12/06
Outreach materials in a 2 nd language	Year 5	E&HR Program/PIO	Available by 12/07



Compliance Strategies

MCM 2 – Public Involvement



BMP/Task	Year to Implement	Primary Responsible Party(ies)	Measurable Goals
Public Info Session on P2	Year 1	E&HR Program/PIO	By 12/03, conduct 1
Citizen Feedback Line for SWM Issues	Year 1	B&D	By 12/03, advertise customer service #
Utilize WRTAC to funnel input on LC SWM Prog.	Year 1	B&D	By 12/03, LC staff to brief WRTAC 2x/yr.
Highlight Involvement Opportunities Through Other Organizations	Year 2	E&HR Program/PIO	Posted to LC web site by 12/04
Internet "Mail To" Functionality on Web Site	Year 3	E&HR Program	By 12/05, establish "Mail To" button for E-mail inquiries on SWM



Compliance Strategies MCM 3

Illicit Discharge Detection & Elimination



BMP/Task	Year to Implement	Primary Responsible Party(ies)	Measurable Goals
Citizen Contact Point for ID detection, feedback	Year 1	B&D	By 12/03, publicize customer service #
Review/Amend/ Supplement/Utilize Existing Ordinances	Years 1-3	County Attorney	ID/Utilize existing authorities during P2 SWM ord. dev.
Conduct physical survey and map SW system in Eastern LC	Year 1	General Services	Complete by 12/03
Stormwater Outfall Capture	Year 2	General Services	Complete by 6/04
Outfall Mapping Update Program	Years 2-5	General Services	Begins 7/04
ID regulated outfalls	Year 2	General Services	By 12/04
Train & Equip Staff, est. SOGs	Year 2	General Services	By 12/04
Develop ID Enforcement Ordinance	Year 3	County Attorney	By 12/05
Initial Inspection of Regulated outfalls	Year 3	General Services	Calendar year 2005
Est. regular outfall inspection schedule	Year 3	General Services	By 12/05
Regular outfall inspections	Years 4 & 5	General Services	Based on est. schedule, begin 1/06
Follow up on IDs	Year 4	General Services	Begin 12/06
Est. Complaint Tracking	Year 4	E&HR Program	By 12/06



Compliance Strategies

MCM 4 – Construction Site SWM



BMP/Task	Year to Implement	Primary Responsible Party(ies)	Measurable Goals
Obtain and Maintain DCR E&S Program Consistency rating	Year 1	B&D	Obtain by 12/03, maintain thereafter
Utilize DEQ VPDES General Permit for Storm Water Discharges from Construction Activities	Year 1	B&D	By 12/03, require submission, receive copy w/in 2 weeks of submission
Citizen Feedback Line for SWM Issues	Year 1	B&D	By 12/03, advertise customer service #



Compliance Strategies

MCM 5 – Post Construction SWM



BMP/Task	Year to Implement	Primary Responsible Party(ies)	Measurable Goals
Coordinate LC development ordinance to WQ/SWM requirements under County FSM	Year 1	B&D/ County Attorney	Complete Development ordinance review and any amendments by 12/03
Database of all BMP owners (7/02 forward)	Year 1	B&D	By 12/03
Notify all property owners of the requirement to submit BMP Inspection reports to B&D post 7/02	Year 2	B&D	Advise of reporting requirement by 12/04
Require annual BMP Maintenance Reports from BMP owners post 7/02	Year 4	B&D (initial report), General Services (off bond)	Process established by 12/06
Implement BMP maintenance agreement enforcement protocol	Year 4	General Services	By 12/06



Compliance Strategies

MCM 6 – PP/GH



BMP/Task	Year to Implement	Primary Responsible Party(ies)	Measurable Goals
ID ongoing PP efforts in LC municipal operations	Year 1	General Services	By 12/03, # and frequency of activities identified
Track applicator certifications for LC staff	Year 1	E&HR Program	Established by 12/03
Develop SOPs/SOGs for PP – include in contracts	Year 2	General Services (CIP) and Purchasing	Developed by 12/04
SWPPP evaluation of all LC owned properties	Year 2	General Services	Evaluate by 12/04
Develop SWPPPs as necessary	Year 3	General Services & LCPS	Developed by 12/05
Develop SOPs/SOGs for LC maintenance practices	Year 3	General Services & LCPS	Developed by 12/05
PP training for field crews, inspectors, and field managers	Years 3-5	General Services	By 12/05 for up to 25 per year
Train Site Staff on SWPPPs and SOPs/SOGs	Years 4-5	General Services & LCPS	Beginning 1/06
Develop remedial action plans for LC sites based on SWPPPs/SOPs/SOGs	Year 4	General Services & LCPS	Developed by 6/06
Execute remedial action plans as necessary	Years 4-5	General Services & LCPS	Beginning 7/06



Compliance Strategies Can We Meet the MEP?...



**Maximum
Extent
Practicable**

	LEGAL	TECHNICAL	ADMINISTRATIVE	FINANCIAL
Public Education	✓	✓	✓	✓
Public Involvement	✓	✓	✓	✓
Illicit Connection	✓	✓	✓	✓
Construction	✓	✓	✓	✓
Post-Construction	✓	✓	✓	✓
Pollution Prevention	✓	✓	✓	✓



Fiscal Impact of NPDES Phase II Conceptual Cost Estimate



P2 MCM	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Totals
Pg Dev/Ex	\$400,352	\$188,943	\$192,511	\$181,186	\$185,122	\$189,176	\$1,337,290
MCM 1	\$0	\$3,500	\$3,775	\$42,473	\$10,697	\$21,018	\$81,464
MCM 2	\$0	\$5,000	\$4,620	\$6,759	\$4,901	\$5,048	\$26,328
MCM 3	\$874,000	\$398,100	\$496,252	\$495,544	\$489,301	\$470,680	\$3,223,876
MCM 4	\$0	\$325,544	\$335,310	\$345,369	\$355,730	\$366,402	\$1,728,356
MCM 5	\$0	\$2,000	\$2,060	\$2,122	\$102,185	\$102,251	\$210,618
MCM 6	\$0	\$41,000	\$31,030	\$6,061	\$6,093	\$21,126	\$105,309
Sys. Main.	\$141,982	\$240,000	\$260,000	\$278,000	\$235,000	\$240,000	\$1,394,982
TOTAL	\$1,416,334	\$1,204,086	\$1,325,558	\$1,357,514	\$1,389,030	\$1,415,701	\$8,108,224
Budgeted	\$1,416,334	\$1,204,086	\$1,325,558	\$1,357,514	\$1,389,030	\$1,415,701	\$8,108,224
Additional	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Staff funding allocations are covered through individual Department Operating Budgets. For all staff allocations, a 3% annual increase is included to account for inflation. Other program allocations are provided through the following codes: Index Codes 480603 - \$1,174,000 (FY '02-03) and 990212 - \$2,541,982 (FY '03 through '08)